

PCT

WORLD INTELLECTUAL PROPERTY ORGANIZATION
International Bureau



INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification ⁶ :
H04Q 7/38

A2

(11) International Publication Number: WO 99/31917

(43) International Publication Date: 24 June 1999 (24.06.99)

(21) International Application Number: PCT/FI98/00971

(22) International Filing Date: 11 December 1998 (11.12.98)

(30) Priority Data:
974502 12 December 1997 (12.12.97) FI

(71) Applicant (for all designated States except US): NOKIA
TELECOMMUNICATIONS OY [FI/FI]; Keilalahdentie 4,
FIN-02150 Espoo (FI).

(72) Inventors; and

(75) Inventors/Applicants (for US only): HAUMONT, Serge
[FR/FI]; Tehtaankatu 6 B 14, FIN-00140 Helsinki (FI).
LINDHOLM, Heikki [FI/FI]; Peräsin 3 D 2, FIN-02320
Espoo (FI). SÖDERBACKA, Lauri [FI/FI]; Aarnivalkeantie
5 B 26, FIN-02100 Espoo (FI). BÄCK, Juha [FI/FI];
Kulosaaren Puistotie 44 B 22, FIN-00570 Helsinki (FI).
NIEMI, Juhapekka [FI/FI]; Tahmelanvaltatie 33 as 5,
FIN-33250 Tampere (FI). KESKINEN, Matti [FI/FI];
Retiisikuja 4, FIN-04400 Järvenpää (FI). HARTIKAINEN,
Jari [FI/FI]; Metsärinne 7B, FIN-04220 Kerava (FI).

(74) Agent: PATENT AGENCY COMPATENT LTD.; Teollisu-
uskatu 33, P.O. Box 156, FIN-00511 Helsinki (FI).

(81) Designated States: AL, AM, AT, AU, AZ, BA, BB, BG, BR,
BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD,
GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP,
KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK,
MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG,
SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU,
ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SZ, UG,
ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ,
TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI,
FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent
(BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE,
SN, TD, TG).

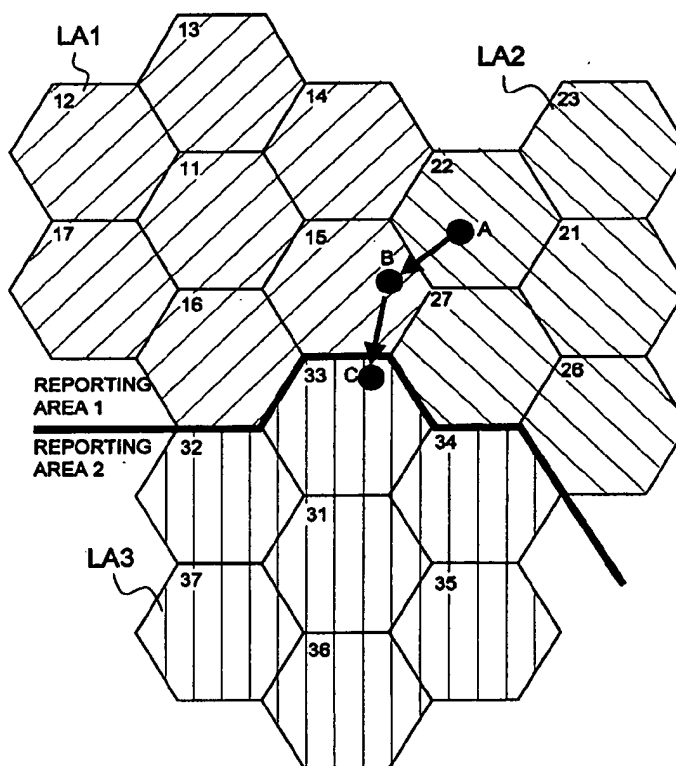
Published

Without international search report and to be republished
upon receipt of that report.

(54) Title: LOCATION MANAGEMENT IN A MOBILE TELECOMMUNICATION SYSTEM

(57) Abstract

The basic idea of the invention is to separate the location area used in the RAN and the reporting area used when reporting the location of the mobile to the core network. The size of the location area is selected preferably in the RAN based on the services used by the subscriber to optimize the use of radio resources. A reporting area comprises one or a plurality of location areas. The size of a reporting area is selected based on the accuracy of location information needed in the core network. The RAN informs the core network when a subscriber moves out of his current location area. The core network and the radio access network negotiate the size of the reporting area prior to the activation of the service. Additionally, the reporting areas can be renegotiated when the service is in the active state.



FOR THE PURPOSES OF INFORMATION ONLY

Codes used to identify States party to the PCT on the front pages of pamphlets publishing international applications under the PCT.

AL	Albania	ES	Spain	LS	Lesotho	SI	Slovenia
AM	Armenia	FI	Finland	LT	Lithuania	SK	Slovakia
AT	Austria	FR	France	LU	Luxembourg	SN	Senegal
AU	Australia	GA	Gabon	LV	Latvia	SZ	Swaziland
AZ	Azerbaijan	GB	United Kingdom	MC	Monaco	TD	Chad
BA	Bosnia and Herzegovina	GE	Georgia	MD	Republic of Moldova	TG	Togo
BB	Barbados	GH	Ghana	MG	Madagascar	TJ	Tajikistan
BE	Belgium	GN	Guinea	MK	The former Yugoslav Republic of Macedonia	TM	Turkmenistan
BF	Burkina Faso	GR	Greece	ML	Mali	TR	Turkey
BG	Bulgaria	HU	Hungary	MN	Mongolia	TT	Trinidad and Tobago
BJ	Benin	IE	Ireland	MR	Mauritania	UA	Ukraine
BR	Brazil	IL	Israel	MW	Malawi	UG	Uganda
BY	Belarus	IS	Iceland	MX	Mexico	US	United States of America
CA	Canada	IT	Italy	NE	Niger	UZ	Uzbekistan
CF	Central African Republic	JP	Japan	NL	Netherlands	VN	Viet Nam
CG	Congo	KE	Kenya	NO	Norway	YU	Yugoslavia
CH	Switzerland	KG	Kyrgyzstan	NZ	New Zealand	ZW	Zimbabwe
CI	Côte d'Ivoire	KP	Democratic People's Republic of Korea	PL	Poland		
CM	Cameroon	KR	Republic of Korea	PT	Portugal		
CN	China	KZ	Kazakstan	RO	Romania		
CU	Cuba	LC	Saint Lucia	RU	Russian Federation		
CZ	Czech Republic	LI	Liechtenstein	SD	Sudan		
DE	Germany	LK	Sri Lanka	SE	Sweden		
DK	Denmark	LR	Liberia	SG	Singapore		
EE	Estonia						